6. (Amended) Method as claimed in claim 1, characterized in that the solid phase is magnetic.

7. (Amended) Method as claimed in claim 1, characterized in that the salt is an alkali, alkaline earth or/and ammonium halide.

8. (Amended) Method as claimed in claim 1, characterized in that a polyethylene glycol having an average molar mass of 1000 to 20000 g/mol is added.

A1 cont.

9. (Amended) Method as claimed in claim 1, characterized in that the salt is used at a final concentration of 5 mmol/1 to 4 mol/l.

10. (Amended) Method as claimed in claim 1, characterized in that polyethylene glycol is used at a final concentration of 5% by weight of 40% by weight.

11. (Amended) Method as claimed in claim 1, characterized in that the nucleic acid is DNA.

12. (Amended) Method as claimed in claim 1, characterized in that the nucleic acid is amplification products.

13. (Amended) Method as claimed in claim 1, characterized in that single-stranded or double-stranded nucleic acids are selectively bound.

14. (Amended) Method as claimed in claim 1, characterized in that the nucleic acid is selectively bound with regard to size in a range of $\geq$ 5 nucleotides to $\leq$ 1000 nucleotides.

17. (Amended) Method as claimed in claim 15, characterized in that the solid phase separated in step (c) is washed with a buffer solution which detached impurities bound to the solid phase but not the nucleic acids bound to the solid phase.

A2

18. (Amended) Method as claimed in claim 15, characterized in that the nucleic acid is detached in step (d) by means of an elution solution.

19. (Amended) Method as claimed in claim 15, characterized in that the nucleic acid detached from the solid phase and the solid phase are separated by magnetic means.

A2 cont.

20. (Amended) Method as claimed in claim 15, characterized in that the nucleic acid obtained is subjected to a mass spectrometric analysis.

25. (Amended) Reagent kit for carrying out a method as claimed in claim 1, comprising:

A3

(a) a binding buffer which contains a salt and a polyethylene glycol and

(b) a solid phase which has hydrophobic and hydrophilic groups on its surface.

29. (Amended) Method as claimed in claim 27, characterized in that the polymer matrix contains a hydrophilic organic polymer.

A4

30. (Amended) Method as claimed in claim 27, characterized in that the hydrophilic polymer matrix comprises a polysaccharide.

32. (Amended) Method as claimed in claim 30, characterized in that the polysaccharide is dextran.

A5

33. (Amended) Method as claimed in claim 27, characterized in that the dehydrating reagent is selected from the group comprising salts and polyethylene glycol or mixtures thereof.

35. (Amended) Method as claimed in claim 27, characterized in that the hydrophilic water-containing polymer matrix forms and envelope polymer around a magnetic core.

38. (Amended) Method for determining the nucleotide sequence of a nucleic acid comprising the steps:

(a) binding a nucleic acid to a solid phase according to the method of claim 27 and

(b) sequencing the nucleic acid by known methods.

39. (Amended) Method as claimed in claim 38, additionally comprising the step:

(c) purifying the sequencing products.

40. (Amended) Method for synthesizing nucleic acids comprising the steps:

(a) Method for synthesizing nucleic acids comprising the steps:

(b) extending the nucleic acid by at least one nucleotide by known methods.

41. (Amended) Method for detecting an analyte in a sample, characterized in that a solution containing nucleic acids is contracted with a solid phase which comprises a hydrophilic water-containing polymer matrix in the presence of a dehydrating reagent whereby the nucleic acids are reversibly and sequence-unspecifically bound to the solid phase, subsequently the solid phase is contacted with the sample and the analyte is detected by means of the binding to the bound nucleic acids.

42. (Amended) Reagent kit for carrying out a method as claimed in claim 27, comprising: